UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,567	05/10/2001	Gerhard Gille	MO-6323/STA-	6933

34947 7590 03/08/2004

BAYER CHEMICALS CORPORATION
PATENT DEPARTMENT
100 BAYER ROAD
PITTSBURGH, PA 15205-9741

EXAMINER	
WILKINS III, HARRY D	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 03/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 02252004

Application Number: 09/831,567
Filing Date: May 10, 2001
Appellant(s): GILLE ET AL.

Diderico van Eyl
For Appellant

EXAMINER'S ANSWER

This is in response to the amended appeal brief filed 01 March 2004.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the amended appeal brief, filed 01 March 2004, is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 10-15 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7). Thus, Appellant has waived the right to argue individual rejections of dependent claims.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

FR 2,294,133 Felten et al 07-1976

Alonso et al, "Tungsten Trioxide Reduction-Carburization with Carbon Monoxide-Carbon Dioxide Mixtures: Kinetics and Thermodynamics", XP-874467, 22 October 1986.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

-----Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (XP-000874467).

Alonso et al teach the invention substantially as claimed. Alonso et al teach (see abstract) a method of forming tungsten carbides that includes gas-phase carburization of tungsten precursor compound (tungsten trioxide) at temperatures of 700-1100°C, which overlaps the claimed temperature range of 850 to 950°C. The examples disclosed by Alonso et al contain 39, 22 and 0% CO_2. Though Alonso et al do not teach that the CO_2 content is above the Boudouard equilibrium content, based on the disclosure in the specification in Example 1 (page 8), 3% CO_2 is above this value, thus, 39 and 22% are also above the Boudouard equilibrium content.

However, Alonso et al do not teach that the carbon acitivity is between 0.4 to less than 1.

The specific examples disclosed by Alonso et al have carbon activities, calculated from Appellant's formula on page 3 of the specification that are 0.026 (61 wt% CO), 0.077 (78 wt% CO) and essentially infinity (100 wt% CO). Thus, Alonso et al teach a broad range for the carbon activity that encompasses the claimed range (the carbon activity is based upon the CO and CO_2 composition, with smaller amounts of CO_2 yielding higher carbon activities). Changes in temperatures, concentrations or other process conditions of an old process do not impart patentability unless the recited ranges are critical, i.e., they produce a new and unexpected result. In re Aller et al (CCPA 1955) 220 F2d 454, 105 USPQ 233. The carbon activity was a known result effective variable because Alonso et al varies it (by means of differing CO/CO_2 ratios) to achieve different results.

Regarding claim 11, see above discussion of carbon activity.

Regarding claim 12, Alonso et al teach (see page 145) that powders are produced at 900 and 1100°C and are shown in Figure 8. Therefore, Alonso et al teach that the carburization occurs at 900°C.

Regarding claim 13, Alonso et al teach (see abstract) that the carburization treatment time is 6 hours.

Regarding claim 14, Alonso et al teach (see abstract) that the precursor material is tungsten trioxide.

-----Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (XP-000874467) in view of Felten et al (FR 2,294,133).

The teachings of Alonso et al are discussed above in paragraph 3. Alonso et al do not teach that after the powder is carburized, it is subjected to a heat treatment at 1150-1800°C.

Felten et al (FR 2,294,133) teach (see page 2) that the reaction $WO_3 + 4C \rightarrow WC + 3\ CO$ proceeds at 1200-1500°C. Thus, if treated at this temperature, any WO_3 would be converted to WC.

Therefore, it would have been obvious to one of ordinary skill in the art to have heat treated the powder of Alonso et al at 1150-1800°C as claimed in order to ensure that all of the precursor WO_3 has been converted to WC.

(11) Response to Argument

Appellant has argued that:

a. Alonso et al disclose that the "most appropriate conditions" include using 100% CO, not a CO/CO_2 mixture.

In response, Appellant is reminded that the disclosure of the prior art should not be construed as being limited only to specific examples or preferred embodiments. See 2145.X.D.I.

b. The present invention produces an unexpected result of ensuring fast reaction with deposition of free carbon.

In response, as previously indicated in the final rejection, this argument is not supported by facts. Mere allegation of fact, without data to back up the assertion, cannot overcome the prima facie case of obviousness. See MPEP 2145.I. The

Examiner invited data to be submitted that showed this unexpected result, but no data has been submitted.

c. Alonso et al does not teach a broad range of carbon activity.

In response, in the Examiner's opinion, Alonso et al suggests a broad range of gas compositions with varying amounts of CO and CO_2. Since the carbon activity at a constant temperature relies only on the content of CO and CO_2, it stands to reason that a broad range of CO_2 content would also teach a broad range of carbon activity.

d. The rejection of claim 15 is not valid.

In response, Appellant earlier waived the right to argue dependent claims by stating that all of the claims stand or fall together.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Harry D Wilkins, III
Examiner
Art Unit 1742

hdw
March 1, 2004

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

Conferees
Roy King
Douglas McGinty

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741

APPEAL CONFEREE:

DOUGLAS MCGINTY
QUALITY ASSURANCE SPECIALIST
TECHNOLOGY CENTER 1700